3R - 313

REPORTS

DATE:

1998

Public Service Company
of New Mexico
Alvarado Square MS 0408
Albuquerque, NM 87158

April 2, 1998

Mr. William Olson
Hydrogeologist
Oil Conservation Division
2040 So. Pacheco
Santa Fe, New Mexico 87505

RE: 1998 SAN JUAN BASIN ANNUAL GROUNDWATER REPORT

Dear Bill:

PNM is pleased to submit the 1998 Annual Groundwater Report on Unlined Surface Impoundments in the San Juan Basin. Pursuant to PNM's Groundwater Management Program for Unlined Surface Impoundment Closures, the report details the ongoing investigation/remedial activities at unlined surface impoundments having groundwater contamination as identified by PNM. A list of groundwater sites reported in this document is provided below.

Cozzens B1
Dogie Compressor Station East Pit
Dogie Compressor Station North Pit
Florance 32A
Florance Z 40 M
Florance 44
Florance 47X
Florance 124
Hampton 4M
Honolulu Loop Line Drip
Ice Canyon Drip
Jacques 2A
Mangum 1E
McClanahan 22
McClanahan A2E
McCoy Gas Com A1
Miles Federal 1E
Miles Federal 1E Drip
Randleman 1
Reid 16 Drip
Sammons 2
Turner 1A
Turner 3
Zachry 18E

PNM plans to request closure of two of the above sites, the Cozzens B1 and the Sammons 2, in our April 30, 1998 filing of the San Juan Pit Closure Reports to the OCD Santa Fe office. If you have any questions regarding the contents of the report, please contact me at (505) 241-2974.

Sincerely,

Maureen Gannon
Project Manager

Attachment

cc: Ingrid Deklau, WFS
Denny Foust, OCD-Aztec Office
Bill VonDrehle, WFS

bcc: Colin Adams (w/o analytical results)
Kathy Juckes
Ron Johnson (w/o analytical results)
Mark Sikelianos

PNMGS Well Site: **Dogie Compressor Station North**

Groundwater Site Summary Report

Copies: WFS(1)
Operator (1)
NMOCD District Office (1)
NMOCD Santa Fe (1)

Quarter/Year: 2nd/97, 3rd/97, 4th/97 & 1st/98

Operator: Williams Field Services
Sec: 4 **Twn:** 25N **Rng:** 6W **NW1/4**
Canyon: Largo

Vulnerable Class: Original
OCD Ranking: 60
Lead Agency: NMOCD

Topo Map: previously submitted
Well Completion Diagram: Figure 1
Site Map with Analysis: Figure 2
Groundwater Contour Map: Figures 3 (September 1997), Figure 4 (December 1997), and Figure 5 (February 1998)
Hydrograph: Figure 6
Full suite-Groundwater Sampling Results: Table 1
Analytical Results: attached

Activities for Previous Year:

PNM conducted extensive source removal of approximately 6000 cubic yards of soil at the Dogie Compressor Station North pit on June 24, 1997. PNM installed five groundwater monitoring wells at the site on August 8, 1997. All well installations were conducted pursuant to the PNM San Juan Basin Groundwater Management Plan. Figure 1 presents a typical well completion diagram for the monitoring well installation.

On September 17 and December 6, 1997, and on February 10, 1998, PNM performed quarterly sampling of groundwater monitoring wells at the site. PNM measured water levels and conducted groundwater sampling in each well for chemical analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition, on September 17, 1997, MW-1 and MW-2 were sampled for Water Quality Control Commission (WQCC) dissolved metals and major cations/anions. Sampling was performed in strict compliance with EPA protocol.
In all instances, PNM delivered the samples to OnSite Technologies, Farmington, New Mexico. The samples were analyzed using the following methods:

- BTEX using EPA Method 8020
- major cations/anions using various EPA methods
- WQCC metals- filtered (As, Ba, Cd, Cr, Pb, Se, and Ag using inductively coupled plasma (ICP) for heavy metals and atomic absorption spectroscopy (AAS) for Hg and Se).

Results:

Figure 2 presents a site map showing BTEX for each monitoring well since groundwater contamination was discovered. Table 1 provides a summary of the full suite of analytical results collected during the September 17, 1997 sampling event. MW-1, -3 and-4 show BTEX levels below laboratory detection limits. In MW-2, the source well, benzene concentrations have fluctuated for the past three quarters between 62 and 86 ppb. All other BTEX parameters are below WQCC standards. In MW-5, benzene concentrations have decreased over three quarters of sampling from 119 ppb to 12 ppb. All other BTEX parameters are below WQCC standards. Water quality analysis of MW-1 and MW-2 revealed elevated sulfate concentrations in both wells and an elevated chloride level in MW-1. Metals in either well were below WQCC standards.

Figures 3, 4 and 5 provide groundwater contour maps for the months of September and December 1997, and February 1998, respectively. The top of casing elevation for MW-3 appears to be incorrect; therefore, this well was not included in developing the groundwater contour maps for the site. This well will be resurveyed at a future

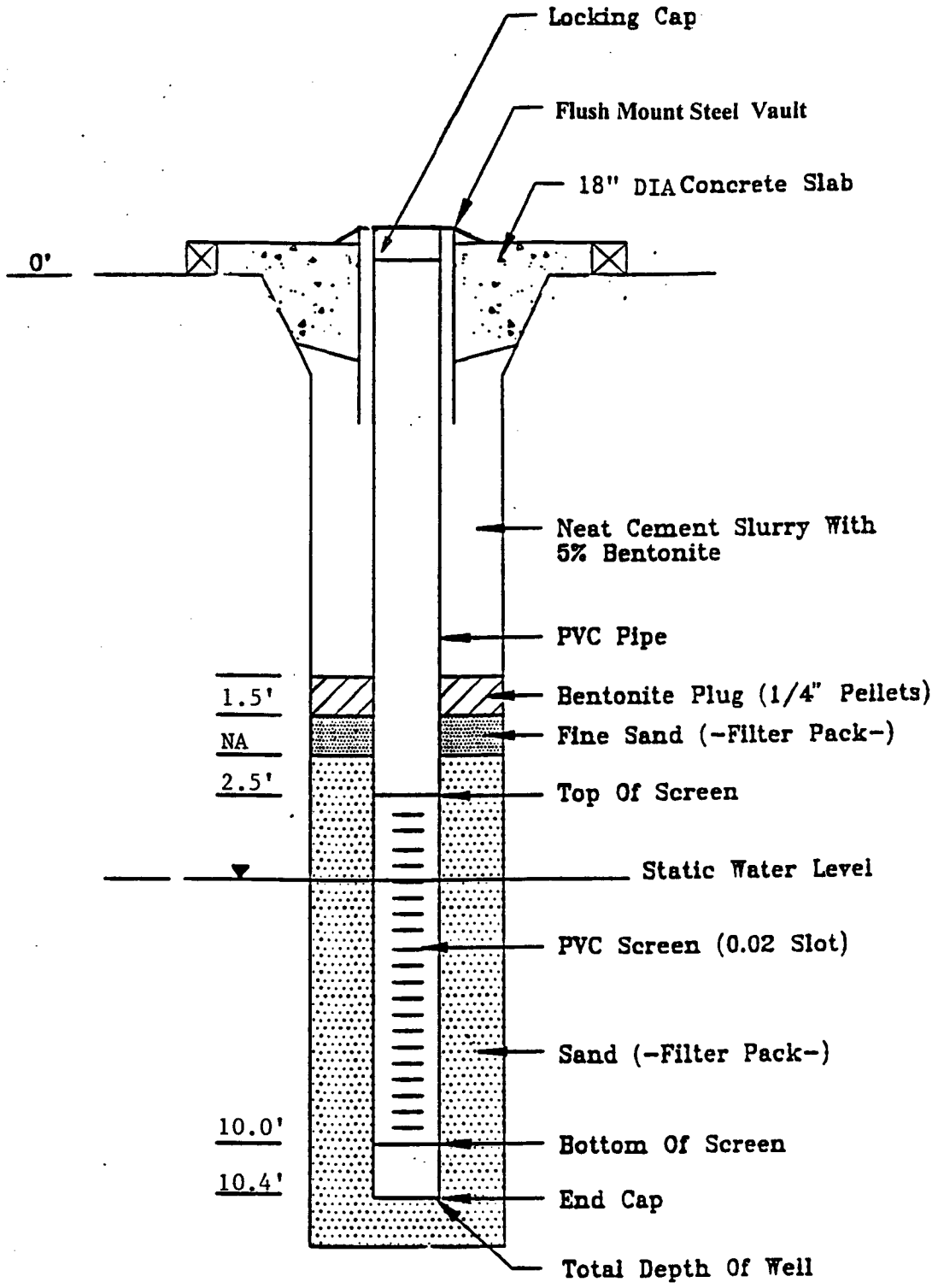
Public Service Company of New Mexico - Gas Services
Environmental Services Division - Alvarado Square, MS-0408
Albuquerque, NM 87158

Contact: Maureen Gannon **Telephone: 505-241-2974**

date. For each calendar quarter, the groundwater flow direction appears to be northwesterly beneath the site (minus the influence of MW-3). Figure 6 presents a groundwater hydrograph of the site since monitoring began. In general, groundwater elevations have risen over the past three quarters of monitoring.

Further Action:

PNM will continue to monitor the groundwater gradient and perform quarterly groundwater monitoring at the Dogie Compressor Station North pit location.



PNM Gas Services	CLIENT: PNM	Dogie CS North Pit
	DATE: / REV. NO.: 0	Figure 1
	AUTHOR: M.D.G. / DRAWN BY: M.P.	Well Completion Diagram
	CK'D BY: M.D.G. / FILE: .DWG	

Figure 2. Dogie North Pit Site Map & Analytical Results (Concentrations in ppb)

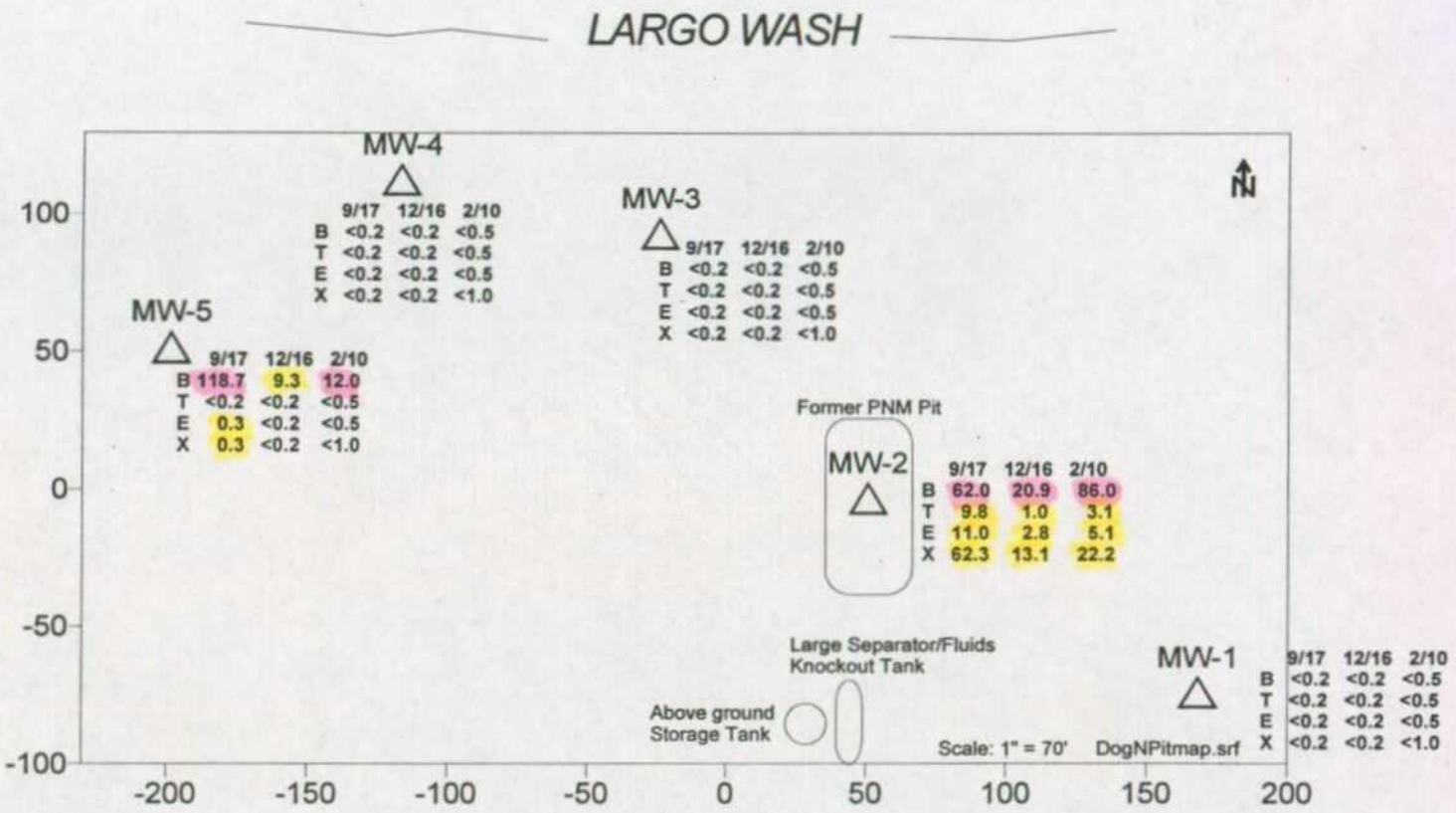


Figure 3. Dogie North Pit Groundwater Contour Map (September 17, 1997)
(w/o MW-3)

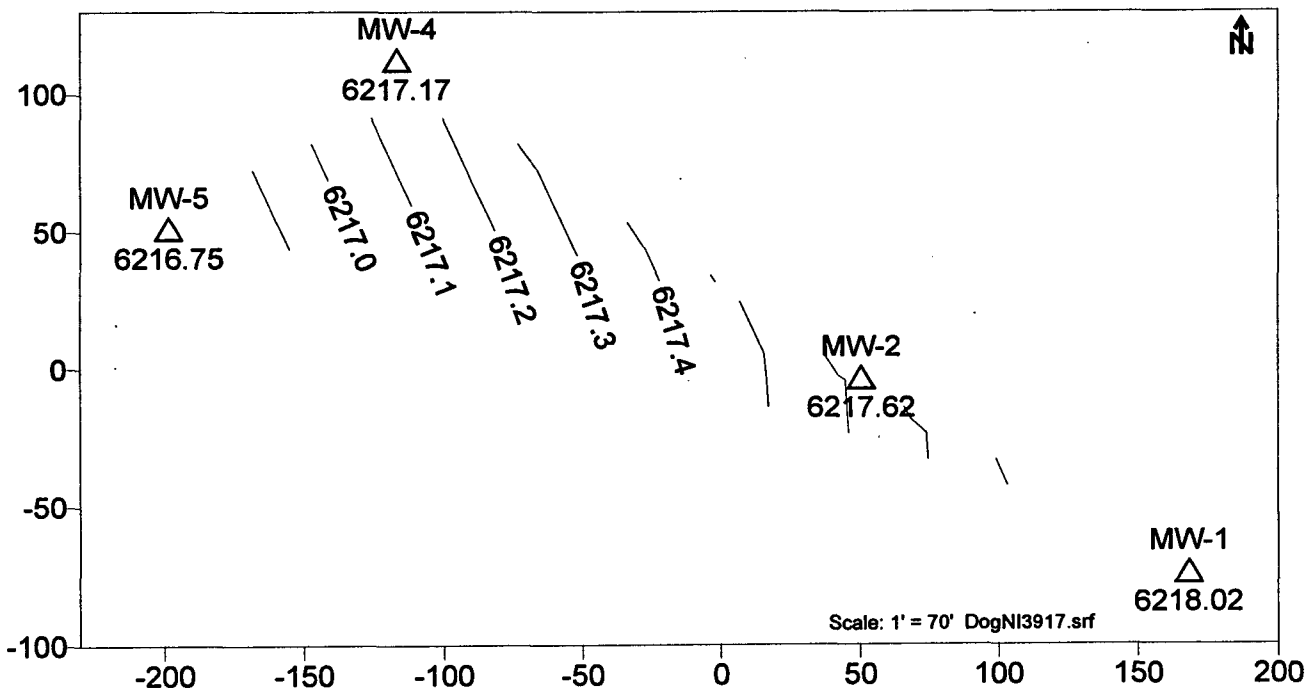


Figure 4. Dogie North Pit Groundwater Contour Map (December 16, 1997) (w/o MW-3)

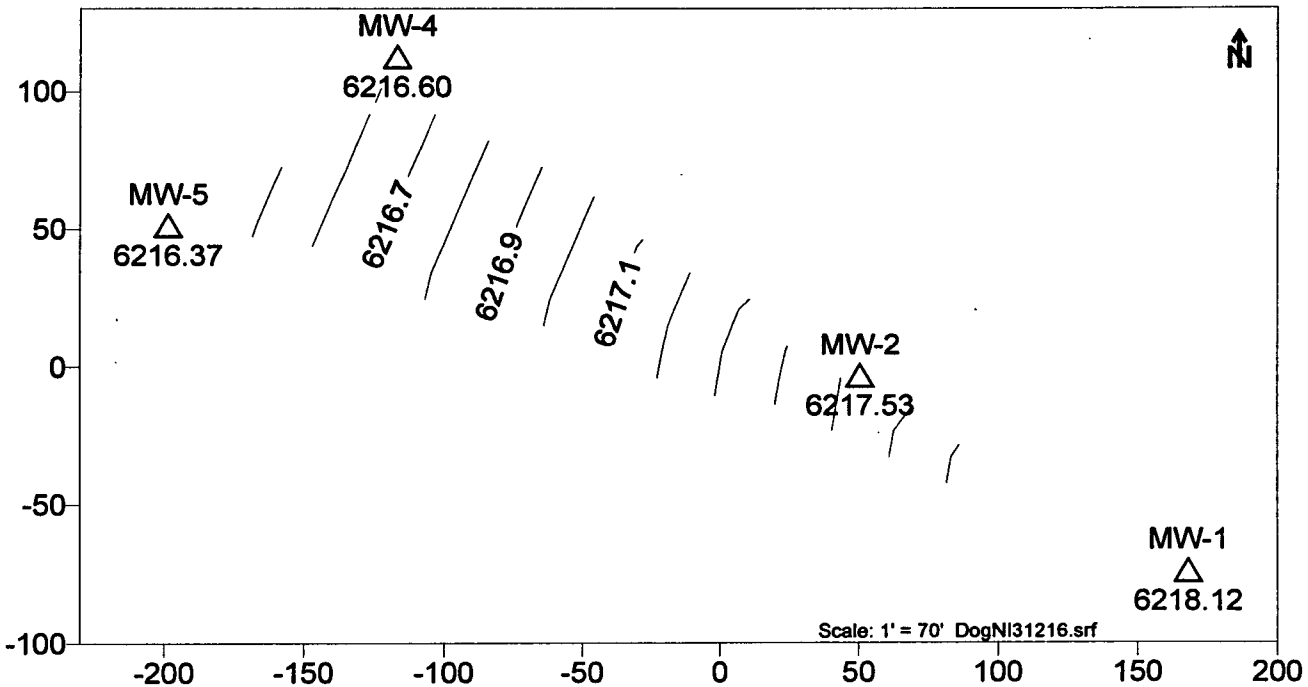


Figure 5. Dogie North Pit Groundwater Contour Map (February 10, 1998) (w/o MW-3)

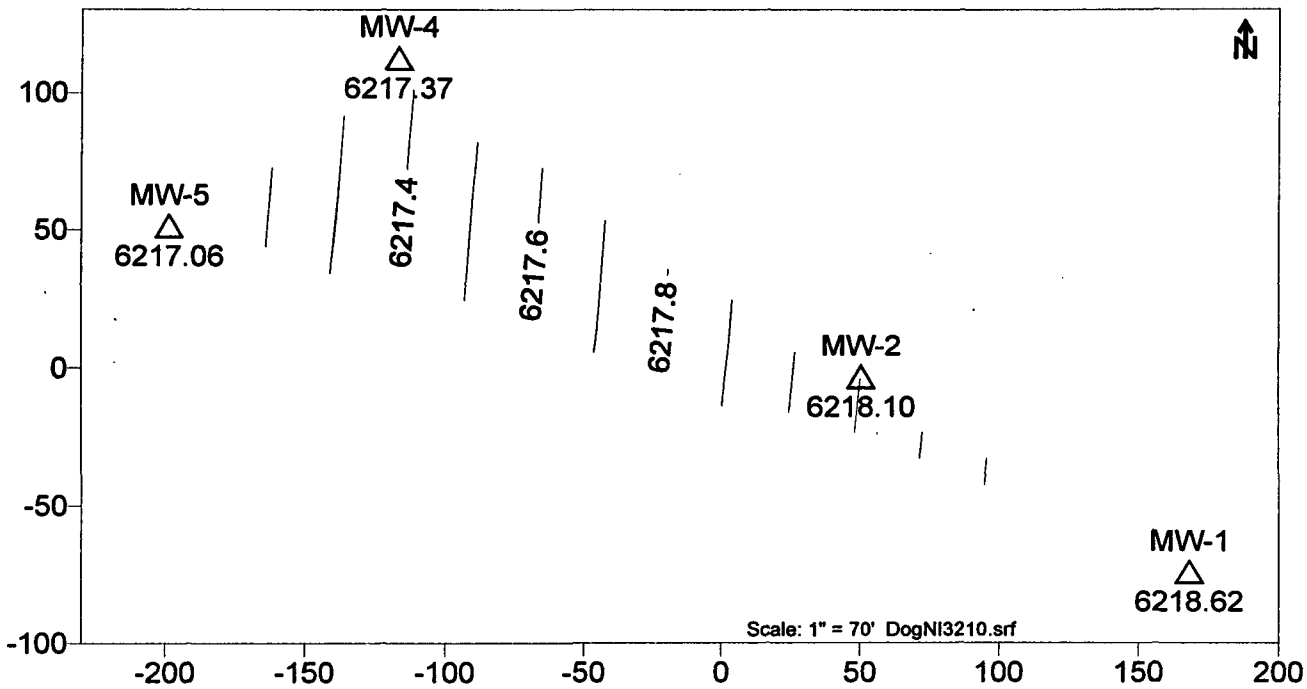


Figure 6. Dogie North Pit Hydrograph

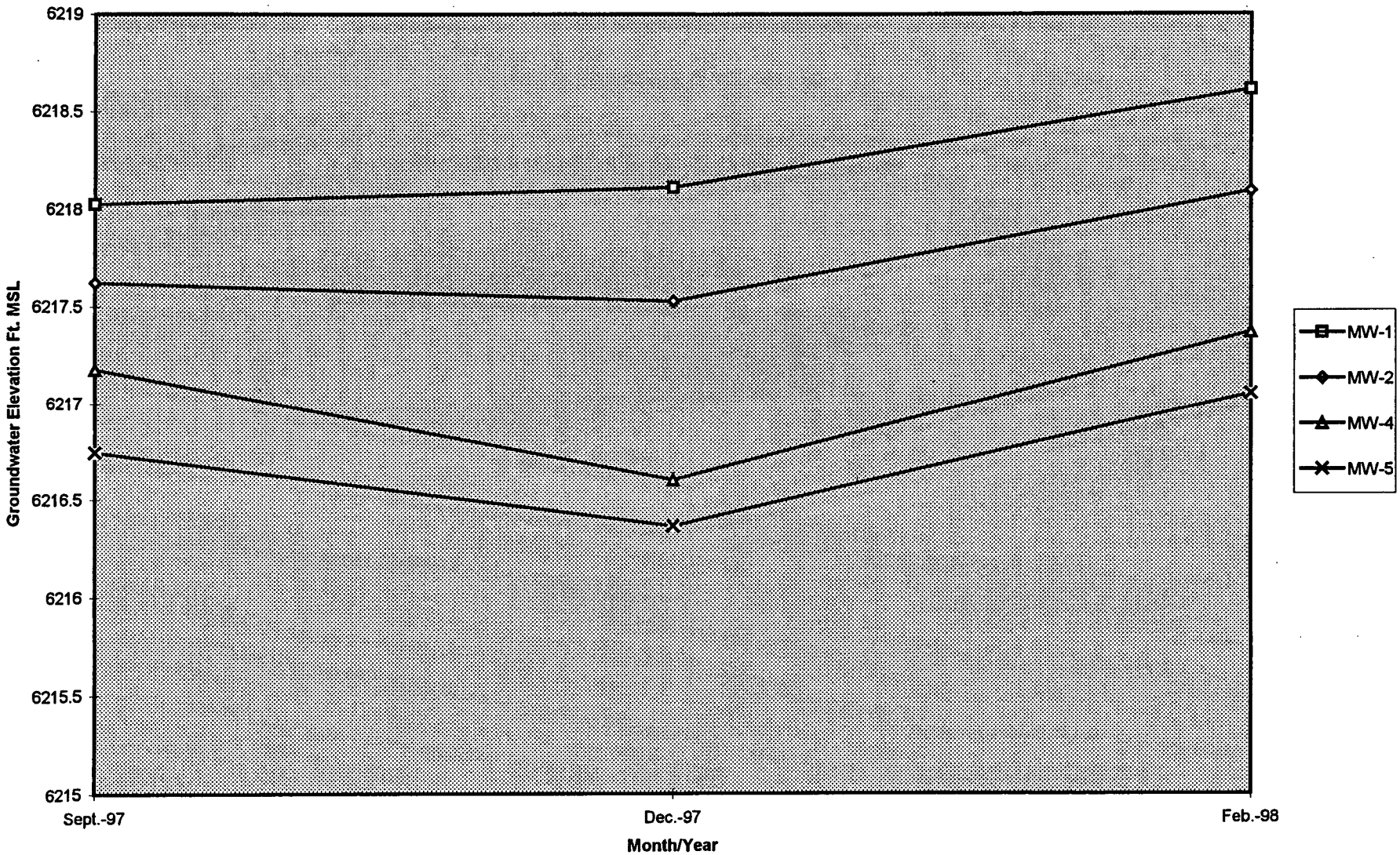


Table 1. DOGIE COMPRESSOR STATION NORTH PIT GROUNDWATER SAMPLING RESULTS, mg/l (9/17/97)

Constituent	WQCC Stds.	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6 *(MW-2 duplicate)*
B	0.01	<0.0002	0.0620	<0.0002	<0.0002	0.1187	0.0610
T	0.75	<0.0002	0.0098	<0.0002	<0.0002	<0.0002	0.0098
E	0.75	<0.0002	0.0110	<0.0002	<0.0002	0.0003	0.0109
X	0.62	<0.0002	0.0623	<0.0002	<0.0002	0.0003	0.0612
PAHs	0.03	NA	NA	NA	NA	NA	NA
Metals							
As	0.1	<0.15	<0.15	NA	NA	NA	NA
Ba	1	0.06	0.14	NA	NA	NA	NA
Cd	0.01	<0.020	<0.020	NA	NA	NA	NA
Cr	0.05	<0.050	<0.050	NA	NA	NA	NA
Pb	0.05	<0.020	<0.020	NA	NA	NA	NA
Se	0.05	<0.01	<0.01	NA	NA	NA	NA
Ag	0.05	<0.030	<0.030	NA	NA	NA	NA
Hg	0.002	<0.0005	<0.0005	NA	NA	NA	NA
Cations/Anions							
Na	NA	458	434	NA	NA	NA	NA
Ca	NA	88	78	NA	NA	NA	NA
Mg	NA	15.6	13.3	NA	NA	NA	NA
K	NA	5.8	5.9	NA	NA	NA	NA
Cl	NA	13.6	13.8	NA	NA	NA	NA
SO4	NA	889	808	NA	NA	NA	NA
CO3	NA	<1	<1	NA	NA	NA	NA
HCO3	NA	513	519	NA	NA	NA	NA
OH	NA	<1	<1	NA	NA	NA	NA
Cation/Anion Balance							
Difference Cation-Anion	NA	1.55	1.73	NA	NA	NA	NA
Total Cation-Anion	NA	53.04	49.70	NA	NA	NA	NA
% Difference	NA	2.9	3.5	NA	NA	NA	NA
TDS, calc	NA	1983	1871	NA	NA	NA	NA
TDS, meas	NA	1851	1770	NA	NA	NA	NA
Hardness as CaCO3	NA	284	248	NA	NA	NA	NA

NA: Not Applicable
BDL: Below Detection Limit
NS: Not Sampled
** Out of Acceptable Range, % Diff. +/-5
P Free Product

s:\gaspits\dogntb.doc

Dogie North Pit

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	1-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5799*
Address:	*603 W. Elm*	Sample No.:	*16239*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie North***				
Project Location:	***9709171130; MW-1***				
Sampled by:	MS/MG	Date:	17-Sep-97	Time:	11:30
Analyzed by:	DC	Date:	29-Sep-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.2	ug/L
Toluene	ND	ug/L	0.2	ug/L
Ethylbenzene	ND	ug/L	0.2	ug/L
m,p-Xylene	ND	ug/L	0.2	ug/L
o-Xylene	ND	ug/L	0.2	ug/L
TOTAL	ND	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:
Date: 10/1/97

ON SITE
TECHNOLOGIES, LTD.
OFF: (505) 325-5667 LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	10-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5799*
Address:	*603 W. Elm*	Sample ID.:	*16239*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie North***				
Project Location:	***9709171130; MW-1***				
Sampled by:	MS/MG	Date:	17-Sep-97	Time:	11:30
Analyzed by:	HR	Date:	25-Sep-97		

Laboratory Analysis

Parameter		Results as Received	Unit of Measure		Results as Received	Unit of Measure	
Cations							
Sodium	*Na*	458	mg/L		19.92	me/L	
Calcium	*Ca*	88	mg/L		4.39	me/L	
Magnesium	*Mg*	15.6	mg/L		1.28	me/L	
Potassium	*K*	5.8	mg/L		0.15	me/L	
Anions							
Chloride	*Cl*	13.6	mg/L		0.38	me/L	
Sulfate	*SO4*	889	mg/L		18.51	me/L	
Carbonate	*CO3 as CaCO3*	<1	mg/L		<0.01	me/L	
Bicarbonate	*HCO3 as CaCO3*	513	mg/L		8.41	me/L	
Hydroxide	*OH as CaCO3*	<1	mg/L		<0.01	me/L	
Total Dissolved Solids Calculated, Sum of Cation/Anion		1983	mg/L				
Total Dissolved Solids Dried @ 180 C		1851	mg/L				
pH		7.66					
Conductivity @ 25 C		2610	uS/cm				
Total Hardness as CaCO3		284	mg/L				

Cation-Anion Balance

1.55 *Difference Cation-Anion, me L*

53.04 *Total Cation-Anion, me L*

2.9 *% Difference Cation-Anion*

Comments

Approved by:

Date:

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	1-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5799*
Address:	*603 W. Elm*	Sample No.:	*16240*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie North***				
Project Location:	***9709171200; MW-2***				
Sampled by:	MS/MG	Date:	17-Sep-97	Time:	12:00
Analyzed by:	DC	Date:	30-Sep-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	62.0	ug/L	0.2	ug/L
Toluene	9.8	ug/L	0.2	ug/L
Ethylbenzene	11.0	ug/L	0.2	ug/L
m,p-Xylene	59.3	ug/L	0.2	ug/L
o-Xylene	3.0	ug/L	0.2	ug/L
TOTAL	145.2	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:
Date: 10/1/97

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	10-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5799*
Address:	*603 W. Elm*	Sample ID.:	*16240*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie North***				
Project Location:	***9709171200; MW-2***				
Sampled by:	MS/MG	Date:	17-Sep-97	Time:	12:00
Analyzed by:	HR	Date:	25-Sep-97		

Laboratory Analysis

Parameter		Results as Received	Unit of Measure		Results as Received	Unit of Measure	
Cations							
Sodium	*Na*	434	mg/L		18.88	me/L	
Calcium	*Ca*	78	mg/L		3.87	me/L	
Magnesium	*Mg*	13.3	mg/L		1.09	me/L	
Potassium	*K*	5.9	mg/L		0.15	me/L	
Anions							
Chloride	*Cl*	13.8	mg/L		0.39	me/L	
Sulfate	*SO4*	808	mg/L		16.82	me/L	
Carbonate	*CO3 as CaCO3*	< 1	mg/L		< 0.01	me/L	
Bicarbonate	*HCO3 as CaCO3*	519	mg/L		8.51	me/L	
Hydroxide	*OH as CaCO3*	< 1	mg/L		< 0.01	me/L	
Total Dissolved Solids Calculated, Sum of Cation/Anion		1871	mg/L				
Total Dissolved Solids Dried @ 180 C		1770	mg/L				
pH		7.74					
Conductivity @ 25 C		2430	uS/cm				
Total Hardness as CaCO3		248	mg/L				

Cation-Anion Balance

1.73 *Difference Cation-Anion, me L*

49.70 *Total Cation-Anion, me L*

3.5 *% Difference Cation-Anion*

Comments

Approved by:
Date:

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	1-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5799*
Address:	*603 W. Elm*	Sample No.:	*16241*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie North***				
Project Location:	***9709171230; MW-3***				
Sampled by:	MS/MG	Date:	17-Sep-97	Time:	12:30
Analyzed by:	DC	Date:	29-Sep-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.2	ug/L
Toluene	ND	ug/L	0.2	ug/L
Ethylbenzene	ND	ug/L	0.2	ug/L
m,p-Xylene	ND	ug/L	0.2	ug/L
o-Xylene	ND	ug/L	0.2	ug/L
TOTAL	ND	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:
Date: 10/1/97

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	1-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5799*
Address:	*603 W. Elm*	Sample No.:	*16242*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie North***				
Project Location:	***9709171300; MW-4***				
Sampled by:	MS/MG	Date:	17-Sep-97	Time:	13:00
Analyzed by:	DC	Date:	29-Sep-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.2	ug/L
Toluene	ND	ug/L	0.2	ug/L
Ethylbenzene	ND	ug/L	0.2	ug/L
m,p-Xylene	ND	ug/L	0.2	ug/L
o-Xylene	ND	ug/L	0.2	ug/L
TOTAL	ND	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By: DG
Date: 10/1/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	1-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5799*
Address:	*603 W. Elm*	Sample No.:	*16243*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie North***				
Project Location:	***9709171330; MW-5***				
Sampled by:	MS/MG	Date:	17-Sep-97	Time:	13:30
Analyzed by:	DC	Date:	29-Sep-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	118.7	ug/L	0.2	ug/L
Toluene	ND	ug/L	0.2	ug/L
Ethylbenzene	0.3	ug/L	0.2	ug/L
m,p-Xylene	ND	ug/L	0.2	ug/L
o-Xylene	0.3	ug/L	0.2	ug/L
TOTAL	119.2	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:

Date: 10/1/97

OFF: (505) 325-5667

ON SITE

LAB: (505) 325-1556

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ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	1-Oct-97
Company:	*PNM Gas Services*	COC No.:	*5799*
Address:	*603 W. Elm*	Sample No.:	*16244*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie North***				
Project Location:	***9709171400; MW-6***				
Sampled by:	MS/MG	Date:	17-Sep-97	Time:	14:00
Analyzed by:	DC	Date:	30-Sep-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	61.0	ug/L	0.2	ug/L
Toluene	9.8	ug/L	0.2	ug/L
Ethylbenzene	10.9	ug/L	0.2	ug/L
m,p-Xylene	58.0	ug/L	0.2	ug/L
o-Xylene	3.2	ug/L	0.2	ug/L
TOTAL	142.9	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:
Date: 10/1/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 29-Sep-97

Internal QC No.: 0527-STD
Surrogate QC No.: 0528-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	Result	Unit of Measure
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	Unit of Measure	True Value	Analyzed Value	RPD	Limit
Benzene	ppb	20.0	18.9	6	15%
Toluene	ppb	20.0	19.8	1	15%
Ethylbenzene	ppb	20.0	19.6	2	15%
m,p-Xylene	ppb	40.0	38.3	4	15%
o-Xylene	ppb	20.0	19.6	2	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	Limit
Benzene	89	88	(39-150)	1	20%
Toluene	94	93	(46-148)	1	20%
Ethylbenzene	93	92	(32-160)	1	20%
m,p-Xylene	92	91	(35-145)	1	20%
o-Xylene	93	93	(35-145)	1	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovered	(70-130)		Limit Percent Recovered	(70-130)	
16239-5799	96				
16241-5799	95				
16242-5799	95				
16243-5799	94				
				HM	(M)
				10/8/97	10/1/97

S1: *Flourobenzene*

OFF: (505) 325-5667

ON SITE

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 30-Sep-97

Internal QC No.: 0527-STD
Surrogate QC No.: 0528-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	*Result*	*Unit of Measure*
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	*Unit of Measure*	*True Value*	*Analyzed Value*	*RPD*	*Limit*
Benzene	ppb	20.0	18.9	6	15%
Toluene	ppb	20.0	20.1	0	15%
Ethylbenzene	ppb	20.0	20.1	0	15%
m,p-Xylene	ppb	40.0	39.1	2	15%
o-Xylene	ppb	20.0	20.2	1	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	97	92	(39-150)	4	20%
Toluene	101	97	(46-148)	3	20%
Ethylbenzene	99	96	(32-160)	3	20%
m,p-Xylene	100	95	(35-145)	3	20%
o-Xylene	98	95	(35-145)	3	20%

Surrogate Recoveries

Laboratory Identification	*S1 Percent Recovered*	*S2 Percent Recovered*	*Laboratory Identification*	*S1 Percent Recovered*	*S2 Percent Recovered*
Limit Percent Recovered	(70-130)		*Limit Percent Recovered*	(70-130)	
16240-5799	91				
16244-5799	101				
				10/8/97	10/1/97

S1: Flourobenzene

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

Cation Anion Balance

Date: 25-Sep-97

Quality Control Sample

Parameter	*Laboratory Identification*	*True Value*	*Analyzed Value*	*Unit of Measure*	*% Diff*	*Limit % Diff*
Sodium, Na	0541-QC	2.32	2.22	mg/L	-4	10
Calcium, Ca	0465-QC	2.18	2.03	mg/L	-7	10
Magnesium, Mg	0465-QC	1.14	1.22	mg/L	7	10
Potassium, K	0541-QC	1.33	1.30	mg/L	-2	10
Chloride, Cl	0538-QC	66	70	mg/L	6	10
Sulfate, SO4	0538-QC	78	74	mg/L	-4	10
Alkalinity	0538-QC	159	168	mg/L	6	10
pH	0538-QC	9.13	9.27		2	10
Conductivity	0538-QC	740	735	uS/cm	-1	15
Total Dissolved Solids, 180C	0538-QC	642	622	uS/cm	-3	15

Matrix Spike

Parameter	*Laboratory Identification*	*Analyzed Value*	*Matrix Spike*	*Spike Value*	*Unit of Measure*	*Spike Recovery*
Sodium, Na	16203-6477	0.84	0.50	1.38	mg/L	103%
Calcium, Ca	16208-6478	1.28	0.50	1.75	mg/L	98%
Magnesium, Mg	16208-6478	1.95	0.50	2.45	mg/L	100%
Potassium, K	16203-6477	0.88	0.50	1.36	mg/L	99%

Method Blank

Parameter	*Laboratory Identification*	*Analyzed Value*	*Unit of Measure*
Sodium, Na	LF-Blank	<0.2	mg/L
Calcium, Ca	LF-Blank	<0.05	mg/L
Magnesium, Mg	LF-Blank	<0.05	mg/L
Potassium, K	LF-Blank	<0.05	mg/L
Chloride, Cl	LF-Blank	<3 X DL	mg/L
Sulfate, SO4	LF-Blank	<1	mg/L
Conductivity	LF-Blank	<2	uS/cm

10/15/97 10/16/97

Mountain States Analytical, Inc.

October 9, 1997

Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401

Reference:
Project: Dogie North
MSAI Group: 17961

Dear Mr. Cox:

Enclosed are the analytical results for your project referenced above. The following samples are included in the report.

16239-5799 (Dissolved) 16240-5799 (Dissolved)

All holding times were met for the tests performed on these samples.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting Mountain States Analytical, Inc. to serve as your analytical laboratory on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

With Regards,

Rolf E. Larsen
Project Manager

Mountain States Analytical, Inc.
The Quality Solution

RECEIVED OCT 1 6 1997 (mc)

On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401

Attn: Mr. David Cox
Project: Dogie North

MSAI Sample: 68594
MSAI Group: 17961
Date Reported: 10/09/97
Discard Date: 11/08/97
Date Submitted: 09/23/97
Date Sampled: 09/17/97
Collected by: DC
Purchase Order:
Project No.:

Sample ID: 16239-5799 (Dissolved) 9709171130; MW-1 (mc)
Matrix: Waste Water

Test	Analysis	Results as Received	Units	Limit of Quantitation
0259B	Mercury by CVAA, w/ww, 7470 Method: SW-846 7470	ND	mg/l	0.0005
0392I	Flame/ICP Prep, w/ww, 3005A Method: SW-846 3005A	Complete		
0392M	Mercury Prep CVAA, w/ww, 7470 Method: SW-846 7470	W 0		
[illegible]01	Prep for HAA, w/ww, 7062/7742 Method: SW-846 7062/7742	Complete		
1451	Selenium by HAA, w/ww, 7742 Method: SW-846 7742	ND	mg/l	0.01
7245	Arsenic by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.15
7246	Barium by ICP, w/ww, 6010A Method: SW-846 6010A	0.06	mg/l	0.02
7249	Cadmium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.020
7251	Chromium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.050
7255	Lead by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.20
7266	Silver by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.030
0939	Sample Filtering, ww, MSAI Method: IN HOUSE MSAI	Complete		

Mountain States Analytical, Inc.
The Quality Solution

On Site Technologies, Ltd.

MSAI Sample: 68594
MSAI Group: 17961

Sample ID: 16239-5799 (Dissolved)

ND - Not detected at the limit of quantitation

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,
Reviewed and Approved by:

Rolf E. Larsen
Project Manager

RECEIVED OCT 16 1997

Mountain States Analytical, Inc.
The Quality Solution

On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401

Attn: Mr. David Cox
Project: Dogie North

MSAI Sample: 68595
MSAI Group: 17961
Date Reported: 10/09/97
Discard Date: 11/08/97
Date Submitted: 09/23/97
Date Sampled: 09/17/97
Collected by: DC
Purchase Order:
Project No.:

Sample ID: 16240-5799 (Dissolved) 9709171200; MW-2
Matrix: Waste Water

Test	Analysis	Results as Received	Units	Limit of Quantitation
0259B	Mercury by CVAA, w/ww, 7470 Method: SW-846 7470	ND	mg/l	0.0005
0392I	Flame/ICP Prep, w/ww, 3005A Method: SW-846 3005A	Complete		
0392M	Mercury Prep CVAA, w/ww, 7470 Method: SW-846 7470	W 0		
1401	Prep for HAA, w/ww, 7062/7742 Method: SW-846 7062/7742	Complete		
1451	Selenium by HAA, w/ww, 7742 Method: SW-846 7742	ND	mg/l	0.01
7245	Arsenic by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.15
7246	Barium by ICP, w/ww, 6010A Method: SW-846 6010A	0.14	mg/l	0.02
7249	Cadmium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.020
7251	Chromium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.050
7255	Lead by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.20
7266	Silver by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.030
0939	Sample Filtering, ww, MSAI Method: IN HOUSE MSAI	Complete		

Mountain States Analytical, Inc.
The Quality Solution

On Site Technologies, Ltd.

MSAI Sample: 68595
MSAI Group: 17961

Sample ID: 16240-5799 (Dissolved)

ND - Not detected at the limit of quantitation

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,
Reviewed and Approved by:

R Elsen

Rolf E. Larsen
Project Manager

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:06
Group: 17961

Analysis Batch Number: 0259B-10/07/97-107 -1
Method Identification : 0259B-Mercury by CVAA, w/ww, 7470 Sequence : 0259B-1
Number of Samples : 8
Batch Data-Date/Time : 10/08/97 / 13:18:09

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-698	Mercury	-0.0900	0.1000

SPIKE

						QC LIMITS	
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	LOWER	UPPER
17959-68592	Mercury	2.0000	0.1200	1.7800	83.0	80.0	120.0

MSD

						QC LIMITS			
SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	LOWER	UPPER	RPD #	LIMIT
17959-68592	Mercury	2.0000	0.1200	1.8200	85.0	80.0	120.0	2.2	20.0

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
17958-68591	Mercury	0.0200	-0.0400	600.0(11)	20.0	1.00

CONTROL

					QC LIMITS	
SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	LOWER	UPPER
LCSW-698	Mercury	2.3700	2.5000	94.8	80.0	120.0

					QC LIMITS	
CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	LOWER	UPPER
	Mercury	3.0000	2.8600	95.3	90.0	110.0
CCV--2	Mercury	5.0000	5.0500	101.0	80.0	120.0
CCV--3	Mercury	5.0000	5.1700	103.4	80.0	120.0
CCV--4	Mercury	5.0000	5.2100	104.2	80.0	120.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Mercury	0.0300	0.1000
CCB-	Mercury	0.0900	0.1000
CCB-	Mercury	0.0300	0.1000
CCB-	Mercury	0.0500	0.1000

---------- Result Footnotes ----------
(11) - Both Duplicate results are less than the MDL.

Groups & Samples

17956-68588 17956-68589 17957-68590 17958-68591 17959-68592 17961-68594 17961-68595 17962-68596

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:11
Group: 1798

Analysis Batch Number: 1451 -10/01/97-001 -1
Identification : 1451 -Selenium by HAA, w/ww, 7742 Sequence : DAAB274
Number of Samples : 14
Batch Data-Date/Time : 10/02/97 / 06:39:39

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-671	Selenium	0.0004	0.0050
PBW1-665-2	Selenium	ND	0.0050

SPIKE

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
18004-68720	Selenium	0.0800	0.4858	0.5933	134.4(2a)	75.0	125.0
17961-68594-2	Selenium	0.0800	-0.0030	0.0743	96.6	75.0	125.0

MSD

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	QC LIMITS LOWER	QC LIMITS UPPER	RPD #	LIMIT
18004-68720	Selenium	0.0800	0.4858	0.5892	129.2(2a)	75.0	125.0	0.7	20.0
17961-68594-2	Selenium	0.0800	-0.0030	0.0632	82.8	75.0	125.0	16.1	20.0

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
18004-68720	Selenium	0.4858	0.5305	8.8	20.0	10.00
17961-68594-2	Selenium	-0.0030	0.0000	200.0(11)	20.0	2.00

CONTROL

SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
[redacted]671	Selenium	0.0354	0.0400	88.5	75.0	125.0
[redacted]665-2	Selenium	0.0348	0.0400	87.0	75.0	125.0

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
ICV-	Selenium	0.0500	0.0470	94.0	90.0	110.0
CCV1--2	Selenium	0.0500	0.0476	95.2	80.0	120.0
CCV2--3	Selenium	0.0500	0.0432	86.4	80.0	120.0
CCV3--4	Selenium	0.0500	0.0450	90.0	80.0	120.0
CCV4--5	Selenium	0.0500	0.0456	91.2	80.0	120.0
CCV5--6	Selenium	0.0500	0.0497	99.4	80.0	120.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Selenium	0.0006	0.0050
CCB1-	Selenium	ND	0.0050
CCB2-	Selenium	ND	0.0050
CCB3-	Selenium	0.0004	0.0050
CCB4-	Selenium	ND	0.0050
CCB5-	Selenium	0.0002	0.0050

---------- Result Footnotes ----------
(2a) - Recovery is insignificant because sample conc. is >4x spike added.
(11) - Both Duplicate results are less than the MDL.

---------- Batch Notes ----------
[redacted]mples associated with digestion batch W-665, including 17907-68442, 17907-68443, 17960-68593, 17961-68594, and [redacted]61-68595 had acceptable quality control results.

Samples associated digestion batch W-671, including 18004-68720, 18004-68721, 18004-68722, 18004-68723, 18004-68726, 18004-18728, and 18004-68729 had selenium values in excess of the linear ragne of the technique.

These samples were analyzed at dilutions ranging from 1:2 to 1:10. The parent sample matrix spike, matrix spike duplicate, serial dilution and post digestion spike required a dilution of 1:10. Quality control results were slightly out of limits, including serial dilution and post digestion spikes.

The serial dilution was recovered at 111.9%. Acceptance limits are 90 to 110%. The post digestion spike was recovered at 115.5%. Acceptance limits are 85 to 115%.

In MSAI's judgement no matrix effect exists and the quality control anomalies are due to high sample values and dilutions.

jdb

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:14
Group: 1796

Analysis Batch Number: 1451 -10/01/97-001 -1
Batch Identification : 1451 -Selenium by HAA, w/ww, 7742 Sequence : DAAB274
Number of Samples : 14
Batch Data-Date/Time : 10/02/97 / 06:39:39

Groups & Samples

17271-66336	17615-67531	17907-68442	17907-68443	17960-68593	17961-68594	17961-68595	18004-68720
18004-68721	18004-68722	18004-68723	18004-68726	18004-68728	18004-68729		

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:20
Group: 17961

Analysis Batch Number: ICPWA-10/02/97-118 -1
Identification : ICPWA-*Metals by ICP
Sequence : DATB275
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

BLANK#	ANALYTE	CONC FOUND #	CONC LIMIT
PBW1-670	Silver	ND	0.0060
	Aluminum	0.0193	0.0500
	Arsenic	0.0064	0.0300
	Barium	0.0013	0.0030
	Beryllium	ND	0.0002
	Calcium	0.1138	0.4000
	Cadmium	0.0005	0.0040
	Chromium	0.0014	0.0100
	Copper	0.0050	0.0100
	Iron	0.0380	0.2000
	Potassium	0.0292	0.1000
	Magnesium	0.0206	0.0500
	Manganese	0.0016	0.0020
	Molybdenum	0.0152	0.0300
	Sodium	0.0604	0.2000
	Nickel	0.0050	0.0300
	Lead	ND	0.0400
	Antimony	ND	0.1000
	Selenium	ND	0.0700
	Silicon	0.0459	0.2000
	Thallium	0.0054	0.1000
	Vanadium	ND	0.0030
	Zinc	0.0296	0.0300
PBW2-670-2	Silver	ND	0.0060
	Aluminum	0.0054	0.0500
	Arsenic	ND	0.0300
	Barium	0.0002	0.0030
	Beryllium	ND	0.0002
	Calcium	0.0586	0.4000
	Cadmium	ND	0.0040
	Chromium	0.0001	0.0100
	Copper	0.0045	0.0100
	Iron	0.0121	0.2000
	Potassium	0.0038	0.1000
	Magnesium	0.0106	0.0500
	Manganese	0.0009	0.0020
	Molybdenum	0.0111	0.0300
	Sodium	0.0070	0.2000
	Nickel	ND	0.0300
	Lead	0.0001	0.0400
	Antimony	0.0197	0.1000
	Selenium	ND	0.0700
	Silicon	0.0927	0.2000
	Thallium	ND	0.1000
	Vanadium	ND	0.0030
	Zinc	0.0027	0.0300

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:22
Group: [illegible]

Analysis Batch Number: ICPWA-10/02/97-118 -1
Method Identification : ICPWA-*Metals by ICP
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

Sequence : DATB275

SPIKE

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	CONC SPIKE	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
17956-68588	Silver	0.0500	-0.0010	0.0442	90.4	80.0	120.0
	Aluminum	2.0000	9.8158	15.4624	282.3(2a)	80.0	120.0
	Arsenic	2.0000	0.0163	1.8581	92.1	80.0	120.0
	Barium	2.0000	0.1714	1.8801	85.4	80.0	120.0
	Beryllium	0.0500	0.0017	0.0455	87.6	80.0	120.0
	Calcium	2.0000	624.8877	628.1472	163.0(2a)	80.0	120.0
	Cadmium	0.0500	0.0007	0.0473	93.2	80.0	120.0
	Chromium	0.2000	0.0072	0.1861	89.4	80.0	120.0
	Copper	0.2500	0.0514	0.2654	85.6	80.0	120.0
	Iron	1.0000	21.0847	23.5782	249.3(2a)	80.0	120.0
	Potassium	10.0000	14.4180	24.4076	99.9	80.0	120.0
	Magnesium	2.0000	55.4827	57.8857	120.1(2a)	80.0	120.0
	Manganese	0.5000	20.3162	20.8274	102.2	80.0	120.0
	Molybdenum	0.5000	0.0247	0.4674	88.5	80.0	120.0
	Sodium	3.0000	164.0427	167.3475	110.2	80.0	120.0
	Nickel	0.5000	0.0378	0.4738	87.2	80.0	120.0
	Lead	0.5000	0.0191	0.4421	84.6	80.0	120.0
	Antimony	0.5000	0.0000	0.3993	79.9(A1)	80.0	120.0
	Selenium	2.0000	-0.0525	1.8224	93.7	80.0	120.0
	Silicon	2.0000	26.0226	33.8212	389.9(2a)	80.0	120.0
	Thallium	2.0000	0.0911	1.8017	85.5	80.0	120.0
	Vanadium	0.5000	0.0235	0.4729	89.9	80.0	120.0
	Zinc	0.5000	0.0973	0.5342	87.4	80.0	120.0

MSD

SAMPLE#	ANALYTE	CONC ADDED	CONC SAMPLE	RESULT 2	%REC2 #	QC LIMITS LOWER	QC LIMITS UPPER	RPD #	LIMIT
17956-68588	Silver	0.0500	-0.0010	0.0489	99.8	80.0	120.0	10.1	20.0
	Aluminum	2.0000	9.8158	15.5592	287.2(2a)	80.0	120.0	0.6	20.0
	Arsenic	2.0000	0.0163	1.8846	93.4	80.0	120.0	1.4	20.0
	Barium	2.0000	0.1714	1.9214	87.5	80.0	120.0	2.2	20.0
	Beryllium	0.0500	0.0017	0.0463	89.2	80.0	120.0	1.7	20.0
	Calcium	2.0000	624.8877	615.1779	-485.5(2a)	80.0	120.0	2.1(2a)	20.0
	Cadmium	0.0500	0.0007	0.0474	93.4	80.0	120.0	0.2	20.0
	Chromium	0.2000	0.0072	0.1921	92.4	80.0	120.0	3.2	20.0
	Copper	0.2500	0.0514	0.2714	88.0	80.0	120.0	2.2	20.0
	Iron	1.0000	21.0847	23.7541	266.9(2a)	80.0	120.0	0.7	20.0
	Potassium	10.0000	14.4180	24.7133	103.0	80.0	120.0	1.2	20.0
	Magnesium	2.0000	55.4827	57.0179	76.8(2a)	80.0	120.0	1.5(2a)	20.0
	Manganese	0.5000	20.3162	20.5152	39.8(2a)	80.0	120.0	1.5(2a)	20.0
	Molybdenum	0.5000	0.0247	0.4775	90.6	80.0	120.0	2.1	20.0
	Sodium	3.0000	164.0427	164.3913	11.6(2a)	80.0	120.0	1.8(2a)	20.0
	Nickel	0.5000	0.0378	0.4666	85.8	80.0	120.0	1.5	20.0
	Lead	0.5000	0.0191	0.4537	86.9	80.0	120.0	2.6	20.0
	Antimony	0.5000	0.0809	0.4267	69.2(A1)	80.0	120.0	6.6	20.0
	Selenium	2.0000	-0.0525	1.8262	93.9	80.0	120.0	0.2	20.0
	Silicon	2.0000	26.0226	35.0630	452.0(2a)	80.0	120.0	3.6	20.0
	Thallium	2.0000	0.0911	1.8211	86.5	80.0	120.0	1.1	20.0
	Vanadium	0.5000	0.0235	0.4806	91.4	80.0	120.0	1.6	20.0
	Zinc	0.5000	0.0973	0.5424	89.0	80.0	120.0	1.5	20.0

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

Analysis Batch Number: ICPWA-10/02/97-118 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

Sequence : DATB275

DUPLICATE

SAMPLE#	ANALYTE	RESULT 1	RESULT 2	RPD #	LIMIT	DILUTION
17956-68588	Silver	-0.0010	0.0023	507.7(11)	20.0	1.00
	Aluminum	9.8158	8.1057	19.1	20.0	1.00
	Arsenic	0.0163	0.0113	36.2(11)	20.0	1.00
	Barium	0.1714	0.1518	12.1	20.0	1.00
	Beryllium	0.0017	0.0017	0.0	20.0	1.00
	Calcium	624.8877	610.9565	2.3	20.0	1.00
	Cadmium	0.0007	0.0029	122.2(11)	20.0	1.00
	Chromium	0.0072	0.0086	17.7	20.0	1.00
	Copper	0.0514	0.0502	2.4	20.0	1.00
	Iron	21.0847	19.6861	6.9	20.0	1.00
	Potassium	14.4180	13.6026	5.8	20.0	1.00
	Magnesium	55.4827	53.6734	3.3	20.0	1.00
	Manganese	20.3162	19.8042	2.6	20.0	1.00
	Molybdenum	0.0247	0.0164	40.4(11)	20.0	1.00
	Sodium	164.0427	156.4015	4.8	20.0	1.00
	Nickel	0.0378	0.0344	9.4	20.0	1.00
	Lead	0.0191	0.0151	23.4(11)	20.0	1.00
	Antimony	0.0809	0.0479	51.2(11)	20.0	1.00
	Selenium	-0.0525	0.0000	200.0(11)	20.0	1.00
	Silicon	26.0226	23.5304	10.1	20.0	1.00
	Thallium	0.0911	0.0537	51.7(11)	20.0	1.00
	Vanadium	0.0235	0.0214	9.4	20.0	1.00
	Zinc	0.0973	0.0877	10.4	20.0	1.00

CONTROL

SAMPLE#	ANALYTE	CONC FOUND	CONC KNOWN	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
LCSW-670	Silver	0.0450	0.0500	90.0	80.0	120.0
	Aluminum	1.9110	2.0000	95.6	80.0	120.0
	Arsenic	1.9465	2.0000	97.3	80.0	120.0
	Barium	1.8681	2.0000	93.4	80.0	120.0
	Beryllium	0.0478	0.0500	95.6	80.0	120.0
	Calcium	2.0468	2.0000	102.3	80.0	120.0
	Cadmium	0.0491	0.0500	98.2	80.0	120.0
	Chromium	0.1977	0.2000	98.9	80.0	120.0
	Copper	0.2360	0.2500	94.4	80.0	120.0
	Iron	0.9697	1.0000	97.0	80.0	120.0
	Potassium	9.6682	10.0000	96.7	80.0	120.0
	Magnesium	1.9609	2.0000	98.0	80.0	120.0
	Manganese	0.4854	0.5000	97.1	80.0	120.0
	Molybdenum	0.4946	0.5000	98.9	80.0	120.0
	Sodium	2.9941	3.0000	99.8	80.0	120.0
	Nickel	0.4869	0.5000	97.4	80.0	120.0
	Lead	0.4985	0.5000	99.7	80.0	120.0
	Antimony	0.4445	0.5000	88.9	80.0	120.0
	Selenium	1.9148	2.0000	95.7	80.0	120.0
	Silicon	1.9804	2.0000	99.0	80.0	120.0
	Thallium	1.9557	2.0000	97.8	80.0	120.0
	Vanadium	0.4870	0.5000	97.4	80.0	120.0
	Zinc	0.4834	0.5000	96.7	80.0	120.0

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:27
Group: 1796

Analysis Batch Number: ICPWA-10/02/97-118 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

Sequence : DATB275

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
ICV-	Silver	0.4000	0.3964	99.1	90.0	110.0
	Aluminum	20.0000	19.1585	95.8	90.0	110.0
	Arsenic	1.6000	1.5872	99.2	90.0	110.0
	Barium	4.0000	3.8304	95.8	90.0	110.0
	Beryllium	0.4000	0.3901	97.5	90.0	110.0
	Calcium	40.0000	40.1705	100.4	90.0	110.0
	Cadmium	4.0000	3.9535	98.8	90.0	110.0
	Chromium	4.0000	4.1066	102.7	90.0	110.0
	Copper	4.0000	3.8662	96.7	90.0	110.0
	Iron	4.0000	4.0692	101.7	90.0	110.0
	Potassium	40.0000	38.0531	95.1	90.0	110.0
	Magnesium	20.0000	19.3594	96.8	90.0	110.0
	Manganese	4.0000	3.9836	99.6	90.0	110.0
	Molybdenum	20.0000	20.3030	101.5	90.0	110.0
	Sodium	40.0000	37.2168	93.0	90.0	110.0
	Nickel	8.0000	7.9838	99.8	90.0	110.0
	Lead	20.0000	20.1874	100.9	90.0	110.0
	Antimony	4.0000	4.0015	100.0	90.0	110.0
	Selenium	1.6000	1.5349	95.9	90.0	110.0
	Silicon	1.6000	1.6574	103.6	90.0	110.0
	Thallium	4.0000	3.9596	99.0	90.0	110.0
	Vanadium	1.6000	1.5553	97.2	90.0	110.0
	Zinc	4.0000	3.9384	98.5	90.0	110.0
CCV1--2	Silver	0.4000	0.3955	98.9	90.0	110.0
	Aluminum	20.0000	19.4301	97.2	90.0	110.0
	Arsenic	1.6000	1.5657	97.9	90.0	110.0
	Barium	4.0000	3.8164	95.4	90.0	110.0
	Beryllium	0.4000	0.3840	96.0	90.0	110.0
	Calcium	40.0000	39.6588	99.1	90.0	110.0
	Cadmium	4.0000	3.8962	97.4	90.0	110.0
	Chromium	4.0000	4.0424	101.1	90.0	110.0
	Copper	4.0000	3.8584	96.5	90.0	110.0
	Iron	4.0000	4.0902	102.3	90.0	110.0
	Potassium	40.0000	37.8083	94.5	90.0	110.0
	Magnesium	20.0000	19.3860	96.9	90.0	110.0
	Manganese	4.0000	3.9478	98.7	90.0	110.0
	Molybdenum	20.0000	20.0684	100.3	90.0	110.0
	Sodium	40.0000	37.5082	93.8	90.0	110.0
	Nickel	8.0000	7.8509	98.1	90.0	110.0
	Lead	20.0000	20.0413	100.2	90.0	110.0
	Antimony	4.0000	3.8553	96.4	90.0	110.0
	Selenium	1.6000	1.5364	96.0	90.0	110.0
	Silicon	1.6000	1.6484	103.0	90.0	110.0
	Thallium	4.0000	3.8984	97.5	90.0	110.0
	Vanadium	1.6000	1.5437	96.5	90.0	110.0
	Zinc	4.0000	3.8874	97.2	90.0	110.0
CCV3--3	Silver	0.4000	0.4031	100.8	90.0	110.0
	Aluminum	20.0000	19.8229	99.1	90.0	110.0
	Arsenic	1.6000	1.6116	100.7	90.0	110.0

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:29
Group: 1796

Analysis Batch Number: ICPWA-10/02/97-118 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

Sequence : DATB275

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC	#	QC LIMITS LOWER	QC LIMITS UPPER
CCV3--3	Barium	4.0000	3.7625	94.1		90.0	110.0
	Beryllium	0.4000	0.3929	98.2		90.0	110.0
	Calcium	40.0000	40.5814	101.5		90.0	110.0
	Cadmium	4.0000	3.9254	98.1		90.0	110.0
	Chromium	4.0000	4.0540	101.4		90.0	110.0
	Copper	4.0000	3.7990	95.0		90.0	110.0
	Iron	4.0000	3.9559	98.9		90.0	110.0
	Potassium	40.0000	39.4701	98.7		90.0	110.0
	Magnesium	20.0000	19.9198	99.6		90.0	110.0
	Manganese	4.0000	3.9365	98.4		90.0	110.0
	Molybdenum	20.0000	19.9715	99.9		90.0	110.0
	Sodium	40.0000	39.4913	98.7		90.0	110.0
	Nickel	8.0000	7.8848	98.6		90.0	110.0
	Lead	20.0000	20.0248	100.1		90.0	110.0
	Antimony	4.0000	3.9634	99.1		90.0	110.0
	Selenium	1.6000	1.5651	97.8		90.0	110.0
	Silicon	1.6000	1.6585	103.7		90.0	110.0
	Thallium	4.0000	3.9366	98.4		90.0	110.0
	Vanadium	1.6000	1.5663	97.9		90.0	110.0
	Zinc	4.0000	3.9044	97.6		90.0	110.0
[redacted]--4	Silver	0.4000	0.4034	100.9		90.0	110.0
	Aluminum	20.0000	19.7115	98.6		90.0	110.0
	Arsenic	1.6000	1.6084	100.5		90.0	110.0
	Barium	4.0000	3.7167	92.9		90.0	110.0
	Beryllium	0.4000	0.3944	98.6		90.0	110.0
	Calcium	40.0000	41.0179	102.5		90.0	110.0
	Cadmium	4.0000	3.9885	99.7		90.0	110.0
	Chromium	4.0000	4.0841	102.1		90.0	110.0
	Copper	4.0000	3.7672	94.2		90.0	110.0
	Iron	4.0000	4.0335	100.8		90.0	110.0
	Potassium	40.0000	39.3301	98.3		90.0	110.0
	Magnesium	20.0000	19.8714	99.4		90.0	110.0
	Manganese	4.0000	3.9529	98.8		90.0	110.0
	Molybdenum	20.0000	20.1712	100.9		90.0	110.0
	Sodium	40.0000	38.6626	96.7		90.0	110.0
	Nickel	8.0000	7.9696	99.6		90.0	110.0
	Lead	20.0000	20.4132	102.1		90.0	110.0
	Antimony	4.0000	4.0318	100.8		90.0	110.0
	Selenium	1.6000	1.5555	97.2		90.0	110.0
	Silicon	1.6000	1.6630	103.9		90.0	110.0
	Thallium	4.0000	4.0951	102.4		90.0	110.0
	Vanadium	1.6000	1.5737	98.4		90.0	110.0
	Zinc	4.0000	3.9076	97.7		90.0	110.0
CCV5--5	Silver	0.4000	0.4048	101.2		90.0	110.0
[redacted]	Aluminum	20.0000	19.9291	99.6		90.0	110.0
	Arsenic	1.6000	1.6115	100.7		90.0	110.0
	Barium	4.0000	3.7499	93.7		90.0	110.0
	Beryllium	0.4000	0.3969	99.2		90.0	110.0
	Calcium	40.0000	41.0726	102.7		90.0	110.0

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:31
Group: 1796

Analysis Batch Number: ICPWA-10/02/97-118 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

Sequence : DATB275

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
CCV5--5	Cadmium	4.0000	3.9626	99.1	90.0	110.0
	Chromium	4.0000	4.0761	101.9	90.0	110.0
	Copper	4.0000	3.7917	94.8	90.0	110.0
	Iron	4.0000	4.0093	100.2	90.0	110.0
	Potassium	40.0000	39.4128	98.5	90.0	110.0
	Magnesium	20.0000	19.8925	99.5	90.0	110.0
	Manganese	4.0000	3.9714	99.3	90.0	110.0
	Molybdenum	20.0000	20.2328	101.2	90.0	110.0
	Sodium	40.0000	38.7226	96.8	90.0	110.0
	Nickel	8.0000	7.9312	99.1	90.0	110.0
	Lead	20.0000	20.2610	101.3	90.0	110.0
	Antimony	4.0000	4.0479	101.2	90.0	110.0
	Selenium	1.6000	1.5589	97.4	90.0	110.0
	Silicon	1.6000	1.6940	105.9	90.0	110.0
	Thallium	4.0000	3.9805	99.5	90.0	110.0
	Vanadium	1.6000	1.5753	98.5	90.0	110.0
	Zinc	4.0000	3.9067	97.7	90.0	110.0
CCV6--6	Silver	0.4000	0.4064	101.6	90.0	110.0
	Aluminum	20.0000	20.0266	100.1	90.0	110.0
	Arsenic	1.6000	1.6059	100.4	90.0	110.0
	Barium	4.0000	3.8215	95.5	90.0	110.0
	Beryllium	0.4000	0.3964	99.1	90.0	110.0
	Calcium	40.0000	40.2553	100.6	90.0	110.0
	Cadmium	4.0000	3.8681	96.7	90.0	110.0
	Chromium	4.0000	4.0367	100.9	90.0	110.0
	Copper	4.0000	3.8576	96.4	90.0	110.0
	Iron	4.0000	4.0279	100.7	90.0	110.0
	Potassium	40.0000	39.8829	99.7	90.0	110.0
	Magnesium	20.0000	19.8221	99.1	90.0	110.0
	Manganese	4.0000	3.9359	98.4	90.0	110.0
	Molybdenum	20.0000	19.9920	100.0	90.0	110.0
	Sodium	40.0000	39.7069	99.3	90.0	110.0
	Nickel	8.0000	7.8587	98.2	90.0	110.0
	Lead	20.0000	19.8836	99.4	90.0	110.0
	Antimony	4.0000	4.1087	102.7	90.0	110.0
	Selenium	1.6000	1.6033	100.2	90.0	110.0
	Silicon	1.6000	1.6775	104.8	90.0	110.0
	Thallium	4.0000	3.9228	98.1	90.0	110.0
	Vanadium	1.6000	1.5851	99.1	90.0	110.0
	Zinc	4.0000	3.8934	97.3	90.0	110.0
CCV7--7	Silver	0.4000	0.3996	99.9	90.0	110.0
	Aluminum	20.0000	19.6809	98.4	90.0	110.0
	Arsenic	1.6000	1.5787	98.7	90.0	110.0
	Barium	4.0000	3.7522	93.8	90.0	110.0
	Beryllium	0.4000	0.3945	98.6	90.0	110.0
	Calcium	40.0000	40.2471	100.6	90.0	110.0
	Cadmium	4.0000	3.8827	97.1	90.0	110.0
	Chromium	4.0000	4.0237	100.6	90.0	110.0
	Copper	4.0000	3.7722	94.3	90.0	110.0

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:3-
Group: 179s'

Analysis Batch Number: ICPWA-10/02/97-118 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

Sequence : DATB275

CCV #	ANALYTE	TRUE VALUE	BATCH READ	% REC #	QC LIMITS LOWER	QC LIMITS UPPER
CCV7--7	Iron	4.0000	3.9816	99.5	90.0	110.0
	Potassium	40.0000	39.1539	97.9	90.0	110.0
	Magnesium	20.0000	19.6912	98.5	90.0	110.0
	Manganese	4.0000	3.9101	97.8	90.0	110.0
	Molybdenum	20.0000	19.9909	100.0	90.0	110.0
	Sodium	40.0000	38.6078	96.5	90.0	110.0
	Nickel	8.0000	7.8442	98.1	90.0	110.0
	Lead	20.0000	19.9819	99.9	90.0	110.0
	Antimony	4.0000	4.0704	101.8	90.0	110.0
	Selenium	1.6000	1.5951	99.7	90.0	110.0
	Silicon	1.6000	1.6592	103.7	90.0	110.0
	Thallium	4.0000	4.0553	101.4	90.0	110.0
	Vanadium	1.6000	1.5741	98.4	90.0	110.0
	Zinc	4.0000	3.8924	97.3	90.0	110.0
CCV8--8	Silver	0.4000	0.4009	100.2	90.0	110.0
	Aluminum	20.0000	20.4039	102.0	90.0	110.0
	Arsenic	1.6000	1.5744	98.4	90.0	110.0
	Barium	4.0000	3.9083	97.7	90.0	110.0
	Beryllium	0.4000	0.4050	101.3	90.0	110.0
	Calcium	40.0000	40.5777	101.4	90.0	110.0
	Cadmium	4.0000	3.8634	96.6	90.0	110.0
	Chromium	4.0000	4.0972	102.4	90.0	110.0
	Copper	4.0000	3.9155	97.9	90.0	110.0
	Iron	4.0000	4.1504	103.8	90.0	110.0
	Potassium	40.0000	40.8615	102.2	90.0	110.0
	Magnesium	20.0000	20.5928	103.0	90.0	110.0
	Manganese	4.0000	3.9379	98.4	90.0	110.0
	Molybdenum	20.0000	19.8151	99.1	90.0	110.0
	Sodium	40.0000	40.2360	100.6	90.0	110.0
	Nickel	8.0000	7.8717	98.4	90.0	110.0
	Lead	20.0000	20.0637	100.3	90.0	110.0
	Antimony	4.0000	4.2415	106.0	90.0	110.0
	Selenium	1.6000	1.5689	98.1	90.0	110.0
	Silicon	1.6000	1.6552	103.5	90.0	110.0
	Thallium	4.0000	3.9026	97.6	90.0	110.0
	Vanadium	1.6000	1.5921	99.5	90.0	110.0
	Zinc	4.0000	3.9489	98.7	90.0	110.0

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Silver	ND	0.0060
	Aluminum	0.0106	0.0500
	Arsenic	ND	0.0300
	Barium	ND	0.0030
	Beryllium	ND	0.0002
	Calcium	ND	0.4000
	Cadmium	0.0014	0.0040
	Chromium	0.0008	0.0100
	Copper	ND	0.0100
	Iron	0.0244	0.2000

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:36
Group: '79s'

Analysis Batch Number: ICPWA-10/02/97-118 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

Sequence : DATB275

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
ICB-	Potassium	0.0083	0.1000
	Magnesium	ND	0.0500
	Manganese	0.0010	0.0020
	Molybdenum	0.0178	0.0300
	Sodium	0.0370	0.2000
	Nickel	0.0064	0.0300
	Lead	ND	0.0400
	Antimony	0.0014	0.1000
	Selenium	ND	0.0700
	Silicon	0.0060	0.2000
	Thallium	ND	0.1000
	Vanadium	ND	0.0030
	Zinc	0.0014	0.0300
CCB1-	Silver	0.0012	0.0060
	Aluminum	0.0150	0.0500
	Arsenic	0.0023	0.0300
	Barium	0.0006	0.0030
	Beryllium	ND	0.0002
	Calcium	0.0109	0.4000
	Cadmium	0.0009	0.0040
	Chromium	0.0013	0.0100
	Copper	0.0002	0.0100
	Iron	0.0561	0.2000
	Potassium	ND	0.1000
	Magnesium	0.0236	0.0500
	Manganese	0.0008	0.0020
	Molybdenum	0.0182	0.0300
	Sodium	0.1052	0.2000
	Nickel	0.0014	0.0300
	Lead	0.0049	0.0400
	Antimony	ND	0.1000
	Selenium	ND	0.0700
	Silicon	ND	0.2000
	Thallium	0.0491	0.1000
	Vanadium	ND	0.0030
	Zinc	0.0027	0.0300
CCB3-	Silver	ND	0.0060
	Aluminum	0.0006	0.0500
	Arsenic	0.0049	0.0300
	Barium	0.0002	0.0030
	Beryllium	ND	0.0002
	Calcium	0.0056	0.4000
	Cadmium	ND	0.0040
	Chromium	0.0004	0.0100
	Copper	0.0008	0.0100
	Iron	ND	0.2000
	Potassium	0.0229	0.1000
	Magnesium	ND	0.0500
	Manganese	0.0005	0.0020
	Molybdenum	0.0185	0.0300

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:38
Group: 17961

Analysis Batch Number: ICPWA-10/02/97-118 -1
Method Identification : ICPWA-*Metals by ICP
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

Sequence : DATB275

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
CCB3-	Sodium	0.0604	0.2000
	Nickel	0.0087	0.0300
	Lead	ND	0.0400
	Antimony	ND	0.1000
	Selenium	ND	0.0700
	Silicon	ND	0.2000
	Thallium	ND	0.1000
	Vanadium	ND	0.0030
	Zinc	ND	0.0300
CCB4-	Silver	ND	0.0060
	Aluminum	ND	0.0500
	Arsenic	0.0042	0.0300
	Barium	0.0003	0.0030
	Beryllium	ND	0.0002
	Calcium	0.0087	0.4000
	Cadmium	0.0002	0.0040
	Chromium	ND	0.0100
	Copper	ND	0.0100
	Iron	ND	0.2000
	Potassium	0.0229	0.1000
	Magnesium	ND	0.0500
	Manganese	0.0004	0.0020
	Molybdenum	0.0092	0.0300
	Sodium	0.0986	0.2000
	Nickel	ND	0.0300
	Lead	ND	0.0400
	Antimony	0.0518	0.1000
	Selenium	ND	0.0700
	Silicon	ND	0.2000
	Thallium	0.0125	0.1000
	Vanadium	ND	0.0030
	Zinc	ND	0.0300
CCB5-	Silver	ND	0.0060
	Aluminum	ND	0.0500
	Arsenic	0.0041	0.0300
	Barium	ND	0.0030
	Beryllium	ND	0.0002
	Calcium	0.0136	0.4000
	Cadmium	0.0002	0.0040
	Chromium	ND	0.0100
	Copper	ND	0.0100
	Iron	ND	0.2000
	Potassium	0.0420	0.1000
	Magnesium	ND	0.0500
	Manganese	0.0007	0.0020
	Molybdenum	0.0209	0.0300
	Sodium	0.0976	0.2000
	Nickel	ND	0.0300
	Lead	ND	0.0400
	Antimony	ND	0.1000

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:-0
Group: 1796

Analysis Batch Number: ICPWA-10/02/97-118 -1
Identification : ICPWA-*Metals by ICP
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

Sequence : DATB275

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
CCB5-	Selenium	ND	0.0700
	Silicon	0.0095	0.2000
	Thallium	ND	0.1000
	Vanadium	ND	0.0030
	Zinc	ND	0.0300
CCB6-	Silver	0.0020	0.0060
	Aluminum	0.0025	0.0500
	Arsenic	0.0149	0.0300
	Barium	0.0005	0.0030
	Beryllium	ND	0.0002
	Calcium	0.0058	0.4000
	Cadmium	0.0008	0.0040
	Chromium	0.0031	0.0100
	Copper	0.0023	0.0100
	Iron	ND	0.2000
	Potassium	0.0236	0.1000
	Magnesium	0.011[illegible]	0.0500
	Manganese	0.0013	0.0020
	Molybdenum	0.0063	0.0300
	Sodium	ND	0.2000
	Nickel	0.0007	0.0300
	Lead	ND	0.0400
	Antimony	0.0792	0.1000
	Selenium	ND	0.0700
	Silicon	0.0033	0.2000
	Thallium	ND	0.1000
	Vanadium	0.0003	0.0030
	Zinc	0.0015	0.0300
CCB7-	Silver	0.0004	0.0060
	Aluminum	0.0107	0.0500
	Arsenic	0.0039	0.0300
	Barium	0.0001	0.0030
	Beryllium	ND	0.0002
	Calcium	0.0062	0.4000
	Cadmium	ND	0.0040
	Chromium	0.0016	0.0100
	Copper	0.0018	0.0100
	Iron	0.0521	0.2000
	Potassium	0.0236	0.1000
	Magnesium	0.0094	0.0500
	Manganese	0.0009	0.0020
	Molybdenum	0.0052	0.0300
	Sodium	ND	0.2000
	Nickel	ND	0.0300
	Lead	ND	0.0400
	Antimony	ND	0.1000
	Selenium	0.0143	0.0700
	Silicon	0.0119	0.2000
	Thallium	ND	0.1000
	Vanadium	ND	0.0030

Mountain States Analytical, Inc.
Daily QC Batching Data
Data Released for Reporting

10/09/97
15:21:42
Group: 17961

Analysis Batch Number: ICPWA-10/02/97-118 -1
Method Identification : ICPWA-*Metals by ICP
Sequence : DATB275
Number of Samples : 18
Batch Data-Date/Time : 10/03/97 / 12:21:19

CCB#	ANALYTE	CONC FOUND #	CONC LIMIT
CCB7-	Zinc	0.0003	0.0300
CCB8-	Silver	0.0013	0.0060
	Aluminum	0.0414	0.0500
	Arsenic	0.0071	0.0300
	Barium	0.0006	0.0030
	Beryllium	ND	0.0002
	Calcium	0.0248	0.4000
	Cadmium	ND	0.0040
	Chromium	0.0039	0.0100
	Copper	0.0050	0.0100
	Iron	0.0602	0.2000
	Potassium	0.0893	0.1000
	Magnesium	0.0270	0.0500
	Manganese	0.0011	0.0020
	Molybdenum	0.0029	0.0300
	Sodium	ND	0.2000
	Nickel	0.0056	0.0300
	Lead	ND	0.0400
	Antimony	ND	0.1000
	Selenium	0.0292	0.0700
	Silicon	0.0061	0.2000
	Thallium	ND	0.1000
	Vanadium	0.0014	0.0030
	Zinc	0.0006	0.0300

---------- Result Footnotes ----------
(2a) - Recovery is insignificant because sample conc. is >4x spike added.
(A1) - Matrix Interference with regard to digestion
(11) - Both Duplicate results are less than the MDL.

---------- Batch Notes ----------
Serial dilutions were recovereved within acceptance limits of +/- 10% for aluminum, calcium, iron, magnesium, manganese, silicon. A post digestion spike was recovered within acceptance limits of +/- 25% for antimony.
jdb

Groups & Samples

17956-68588	17956-68589	17957-68590	17958-68591	17959-68592	17960-68593	17961-68594	17961-68595
17962-68596	17989-68678	17989-68679	18004-68720	18004-68721	18004-68722	18004-68723	18004-68726
18004-68728	18004-68729						

CHAIN OF CUSTODY RECORD

6493

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 9/22/97

Page 1 of 1

Purchase Order No.: 5799 | Job No.

SEND INVOICE TO
Name: ACCOUNTS REC.
Company: ON SITE | Dept.
Address:
City, State, Zip:

REPORT RESULTS TO
Name: DAVID COX | Title:
Company: ON SITE TECH
Mailing Address:
City, State, Zip:
Telephone No. 505 325-2432 | Telefax No. 505 325-6256

Sampling Location: DOGIE NORTH

Sampler: MS/MG

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	1 WQCC METALS DISSOLVED	LAB ID
9709171130 ; MW-1	9/17/97	1130	WW	cool	1	✓	16239-5799
9709171200 ; MW-2	↓	1200	↓	↓	1	✓	16240-5799

Relinquished by:	Date/Time 9/22/97 1600	Received by: Richard Dixon	Date/Time 09/23/97 1050
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date 9/22/97
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:
			SAMPLES NOT YET FILTERED

Distribution: White - On Site Yellow - LAB Pink - Sampler Goldenrod - Client

CHAIN OF CUSTODY RECORD

5799

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 9/17/97

Page 1 of 1

Purchase Order No.: | Job No.

SEND INVOICE TO

Name: Denver Bearden
Company: PNM Gas Services | Dept. 324-3763
Address: 603 W. Elm Street
City, State, Zip: Farmington, NM 87401

REPORT RESULTS TO

Name: Maureen Gannon | Title
Company: PNM Gas Services
Mailing Address: Alverado Square, Mail Stop 0408
City, State, Zip: Albuquerque, NM 87158
Telephone No.: 505-848-2974 | Telefax No.

Sampling Location: Dogie North

Sampler: M.S. M.G.

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX 8020	Major Cation/Anion Balance	WQCC Metals (dissolved)	LAB ID
9709171130 MW-1	9/17/97		H2O	Ice	4	X	X	X	16239-5799
9709171200 MW-2	↓		↓	↓	4	X	X	X	16240-
9709171230 MW-3					2	X			16241-
9709171300 MW-4					2	X			16242-
9709171330 MW-5					2	X			16243-
9709171400 MW-6					2	X			16244-

Relinquished by: Mark Dellinger	Date/Time 9/18/97 1400	Received by: Roy Burnham	Date/Time 9/18/97 1401
Relinquished by: Roy Burnham	Date/Time 9/18/97 1543	Received by: Peter Roose	Date/Time 9/18/97 1543
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: Mark Dellinger (Client Signature Must Accompany Request) Date 9/18/97

Rush	24-48 Hours	10 Working Days	Special Instructions:
			Results to be sent to both parties.

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	30-Dec-97
Company:	*PNM Gas Services*	COC No.:	*5620*
Address:	*603 W. Elm*	Sample No.:	*17099*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie CS North***				
Project Location:	***9712161004; MW-1***				
Sampled by:	RD	Date:	16-Dec-97	Time:	10:04
Analyzed by:	DC	Date:	24-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.2	ug/L
Toluene	ND	ug/L	0.2	ug/L
Ethylbenzene	ND	ug/L	0.2	ug/L
m,p-Xylene	ND	ug/L	0.2	ug/L
o-Xylene	ND	ug/L	0.2	ug/L
TOTAL	ND	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:

Date: 12/30/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	30-Dec-97
Company:	*PNM Gas Services*	COC No.:	*5620*
Address:	*603 W. Elm*	Sample No.:	*17100*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie CS North***				
Project Location:	***9712161031; MW-2***				
Sampled by:	RD	Date:	16-Dec-97	Time:	10:31
Analyzed by:	DC	Date:	24-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	20.9	ug/L	0.2	ug/L
Toluene	1.0	ug/L	0.2	ug/L
Ethylbenzene	2.8	ug/L	0.2	ug/L
m,p-Xylene	11.6	ug/L	0.2	ug/L
o-Xylene	1.5	ug/L	0.2	ug/L
TOTAL	37.9	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:
Date: 12/30/97

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	30-Dec-97
Company:	*PNM Gas Services*	COC No.:	*5620*
Address:	*603 W. Elm*	Sample No.:	*17101*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie CS North***				
Project Location:	***9712161059; MW-3***				
Sampled by:	RD	Date:	16-Dec-97	Time:	10:59
Analyzed by:	DC	Date:	24-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.2	ug/L
Toluene	ND	ug/L	0.2	ug/L
Ethylbenzene	ND	ug/L	0.2	ug/L
m,p-Xylene	ND	ug/L	0.2	ug/L
o-Xylene	ND	ug/L	0.2	ug/L
TOTAL	ND	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:
Date: 12/30/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	30-Dec-97
Company:	*PNM Gas Services*	COC No.:	*5620*
Address:	*603 W. Elm*	Sample No.:	*17102*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie CS North***				
Project Location:	***9712161123; MW-4***				
Sampled by:	RD	Date:	16-Dec-97	Time:	11:23
Analyzed by:	DC	Date:	24-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.2	ug/L
Toluene	ND	ug/L	0.2	ug/L
Ethylbenzene	ND	ug/L	0.2	ug/L
m,p-Xylene	ND	ug/L	0.2	ug/L
o-Xylene	ND	ug/L	0.2	ug/L
TOTAL	ND	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:

Date: 12/30/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	30-Dec-97
Company:	*PNM Gas Services*	COC No.:	*5620*
Address:	*603 W. Elm*	Sample No.:	*17103*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie CS North***				
Project Location:	***9712161152; MW-5***				
Sampled by:	RD	Date:	16-Dec-97	Time:	11:52
Analyzed by:	DC	Date:	24-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	9.3	ug/L	0.2	ug/L
Toluene	ND	ug/L	0.2	ug/L
Ethylbenzene	ND	ug/L	0.2	ug/L
m,p-Xylene	ND	ug/L	0.2	ug/L
o-Xylene	ND	ug/L	0.2	ug/L
TOTAL	9.3	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:

Date: 12/30/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Denver Bearden*	Date:	30-Dec-97
Company:	*PNM Gas Services*	COC No.:	*5620*
Address:	*603 W. Elm*	Sample No.:	*17104*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1000*

Project Name:	***PNM Gas Services - Dogie CS North***				
Project Location:	***9712161212; MW-6***				
Sampled by:	RD	Date:	16-Dec-97	Time:	12:12
Analyzed by:	DC	Date:	24-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	8.1	ug/L	0.2	ug/L
Toluene	ND	ug/L	0.2	ug/L
Ethylbenzene	ND	ug/L	0.2	ug/L
m,p-Xylene	ND	ug/L	0.2	ug/L
o-Xylene	0.2	ug/L	0.2	ug/L
TOTAL	8.3	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:
Date: 12/30/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 24-Dec-97

Internal QC No.: 0559-STD
Surrogate QC No.: 0567-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	Result	Unit of Measure
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	Unit of Measure	True Value	Analyzed Value	RPD	Limit
Benzene	ppb	20.0	18.2	9	15%
Toluene	ppb	20.0	19.1	4	15%
Ethylbenzene	ppb	20.0	19.2	4	15%
m,p-Xylene	ppb	40.0	36.9	8	15%
o-Xylene	ppb	20.0	19.0	5	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	Limit
Benzene	101	88	(39-150)	6	20%
Toluene	100	94	(46-148)	6	20%
Ethylbenzene	100	93	(32-160)	6	20%
m,p-Xylene	97	90	(35-145)	6	20%
o-Xylene	99	93	(35-145)	6	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovered	(70-130)		Limit Percent Recovered	(70-130)	
17099-5620	93				
17100-5620	88				
17101-5620	93				
17102-5620	93				
17103-5620	93				
17104-5620	94			12/30/97	12/30/97

S1: Flourobenzene

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

TECHNOLOGIES, LTD.

February 24, 1998

Maureen Gannon
PNM Gas Services
Alevardo Square, Mail Stop 0408
Albuquerque, NM 87401
TEL: (505) 241-2974
FAX (505) 241-2340

RE: Dogie CS North Order No.: 9802003

Dear Maureen Gannon,

On Site Technologies, LTD. received 6 samples on 2/11/98 for the analyses presented in the following report.

The Samples were analyzed for the following tests:
Aromatic Volatiles by GC-PID (SW8021A)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: *24-Feb-98*

Client:	PNM Gas Services	**Client Sample Info:**	Dogie CS North
Work Order:	9802003	**Client Sample ID:**	9802100950; MW-1
Lab ID:	9802003-01A **Matrix:** AQUEOUS	**Collection Date:**	2/10/98 9:50:00 AM
Project:	Dogie CS North	**COC#:**	7139

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		**SW8021A**				Analyst: **DC**
Benzene	ND	0.5		µg/L	1	2/17/98
Toluene	ND	0.5		µg/L	1	2/17/98
Ethylbenzene	ND	0.5		µg/L	1	2/17/98
m,p-Xylene	ND	1		µg/L	1	2/17/98
o-Xylene	ND	0.5		µg/L	1	2/17/98
Surr: Fluorobenzene	100.0	70-130		%REC	1	2/17/98
Surr: 1,4-Difluorobenzene	101.7	70-130		%REC	1	2/17/98
Surr: 4-Bromochlorobenzene	95.1	70-130		%REC	1	2/17/98

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

P.O. BOX 2606 • FARMINGTON, NM 87499

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: *24-Feb-98*

Client:	PNM Gas Services	**Client Sample Info:**	Dogie CS North
Work Order:	9802003	**Client Sample ID:**	9802101010: MW-2
Lab ID:	9802003-02A **Matrix:** AQUEOUS	**Collection Date:**	2/10/98 10:10:00 AM
Project:	Dogie CS North	**COC#:**	7139

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		**SW8021A**				Analyst: **DC**
Benzene	86	0.5		µg/L	1	2/17/98
Toluene	3.1	0.5		µg/L	1	2/17/98
Ethylbenzene	5.1	0.5		µg/L	1	2/17/98
m,p-Xylene	20	1		µg/L	1	2/17/98
o-Xylene	2.2	0.5		µg/L	1	2/17/98
Surr: Fluorobenzene	95.9	70-130		%REC	1	2/17/98
Surr: 1,4-Difluorobenzene	95.9	70-130		%REC	1	2/17/98
Surr: 4-Bromochlorobenzene	93.9	70-130		%REC	1	2/17/98

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

P.O. BOX 2606 • FARMINGTON, NM 87499

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: *24-Feb-98*

Client:	PNM Gas Services	**Client Sample Info:**	Dogie CS North
Work Order:	9802003	**Client Sample ID:**	9802101024; MW-3
Lab ID:	9802003-03A **Matrix:** AQUEOUS	**Collection Date:**	2/10/98 10:24:00 AM
Project:	Dogie CS North	**COC#:**	7139

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		**SW8021A**				Analyst: **DC**
Benzene	ND	0.5		µg/L	1	2/17/98
Toluene	ND	0.5		µg/L	1	2/17/98
Ethylbenzene	ND	0.5		µg/L	1	2/17/98
m,p-Xylene	ND	1		µg/L	1	2/17/98
o-Xylene	ND	0.5		µg/L	1	2/17/98
Surr: Fluorobenzene	99.5	70-130		%REC	1	2/17/98
Surr: 1,4-Difluorobenzene	101.4	70-130		%REC	1	2/17/98
Surr: 4-Bromochlorobenzene	96.1	70-130		%REC	1	2/17/98

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

P.O. BOX 2606 • FARMINGTON, NM 87499

OFF: (505) 325-5667

ON SITE

LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: *24-Feb-98*

Client:	PNM Gas Services	**Client Sample Info:**	Dogie CS North
Work Order:	9802003	**Client Sample ID:**	9802101037; MW-4
Lab ID:	9802003-04A **Matrix:** AQUEOUS	**Collection Date:**	2/10/98 10:37:00 AM
Project:	Dogie CS North	**COC#:**	7139

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		**SW8021A**				Analyst: **DC**
Benzene	ND	0.5		µg/L	1	2/17/98
Toluene	ND	0.5		µg/L	1	2/17/98
Ethylbenzene	ND	0.5		µg/L	1	2/17/98
m,p-Xylene	ND	1		µg/L	1	2/17/98
o-Xylene	ND	0.5		µg/L	1	2/17/98
Surr: Fluorobenzene	100.0	70-130		%REC	1	2/17/98
Surr: 1,4-Difluorobenzene	101.5	70-130		%REC	1	2/17/98
Surr: 4-Bromochlorobenzene	94.7	70-130		%REC	1	2/17/98

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

P.O. BOX 2606 • FARMINGTON, NM 87499

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: *24-Feb-98*

Client:	PNM Gas Services	**Client Sample Info:**	Dogie CS North
Work Order:	9802003	**Client Sample ID:**	9802101053; MW-5
Lab ID:	9802003-05A **Matrix:** AQUEOUS	**Collection Date:**	2/10/98 10:53:00 AM
Project:	Dogie CS North	**COC#:**	7139

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		**SW8021A**				Analyst: **DC**
Benzene	12	0.5		µg/L	1	2/17/98
Toluene	ND	0.5		µg/L	1	2/17/98
Ethylbenzene	ND	0.5		µg/L	1	2/17/98
m,p-Xylene	ND	1		µg/L	1	2/17/98
o-Xylene	ND	0.5		µg/L	1	2/17/98
Surr: Fluorobenzene	99.7	70-130		%REC	1	2/17/98
Surr: 1,4-Difluorobenzene	100.0	70-130		%REC	1	2/17/98
Surr: 4-Bromochlorobenzene	96.9	70-130		%REC	1	2/17/98

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

P.O. BOX 2606 • FARMINGTON, NM 87499

ON SITE

OFF: (505) 325-5667 LAB: (505) 325-1556

TECHNOLOGIES, LTD.

ANALYTICAL REPORT

Date: *24-Feb-98*

Client:	PNM Gas Services	**Client Sample Info:**	Dogie CS North
Work Order:	9802003	**Client Sample ID:**	9802101111; MW-6
Lab ID:	9802003-06A **Matrix:** AQUEOUS	**Collection Date:**	2/10/98 11:11:00 AM
Project:	Dogie CS North	**COC#:**	7139

Parameter	Result	Limit	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC-PID		**SW8021A**				Analyst: **DC**
Benzene	84	0.5		µg/L	1	2/17/98
Toluene	2.9	0.5		µg/L	1	2/17/98
Ethylbenzene	4.9	0.5		µg/L	1	2/17/98
m,p-Xylene	19	1		µg/L	1	2/17/98
o-Xylene	2.2	0.5		µg/L	1	2/17/98
Surr: Fluorobenzene	96.0	70-130		%REC	1	2/17/98
Surr: 1,4-Difluorobenzene	96.7	70-130		%REC	1	2/17/98
Surr: 4-Bromochlorobenzene	94.2	70-130		%REC	1	2/17/98

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

P.O. BOX 2606 • FARMINGTON, NM 87499

On Site Technologies, LTD.

Date: *24-Feb-98*

CLIENT: PNM Gas Services
Work Order: 9802003
Project: Dogie CS North

QC SUMMARY REPORT

Method Blank

Sample ID: **MB1 W** Batch ID: **GC-1_980217** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **2/17/98** Prep Date:

Client ID: **9802003** Run ID: **GC-1_980217A** SeqNo: **71**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.1481	0.5									J
Ethylbenzene	ND	0.5									
m,p-Xylene	ND	1									
o-Xylene	ND	0.5									
Toluene	.0621	0.5									J

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *24-Feb-98*

CLIENT: PNM Gas Services
Work Order: 9802003
Project: Dogie CS North

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: **CCV2 QC0529/30** Batch ID: **GC-1_980217** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **2/17/98** Prep Date:

Client ID: **9802003** Run ID: **GC-1_980217A** SeqNo: **81**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.26	0.5	20	0	106.3%	85	115				
Ethylbenzene	21.77	0.5	20	0	108.8%	85	115				
m,p-Xylene	42.35	1	40	0	105.9%	85	115				
o-Xylene	22.08	0.5	20	0	110.4%	85	115				
Toluene	21.94	0.5	20	0	109.7%	85	115				
1,4-Difluorobenzene	100.6	0	100	0	100.7%	70	130				
4-Bromochlorobenzene	96.82	0	100	0	96.8%	70	130				
Fluorobenzene	99.99	0	100	0	100.0%	70	130				

Sample ID: **CCV2 QC0529/30** Batch ID: **GC-1_980217** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **2/17/98** Prep Date:

Client ID: **9802003** Run ID: **GC-1_980217A** SeqNo: **72**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.01	0.5	20	0	100.0%	85	115				
Ethylbenzene	21.19	0.5	20	0	105.9%	85	115				
m,p-Xylene	39.98	1	40	0	99 9%	85	115				
o-Xylene	20.82	0.5	20	0	104.1%	85	115				
Toluene	20.3	0.5	20	0	101.5%	85	115				
1,4-Difluorobenzene	101.8	0	100	0	101.8%	70	130				
4-Bromochlorobenzene	99.27	0	100	0	99.3%	70	130				
Fluorobenzene	99.75	0	100	0	99.8%	70	130				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: PNM Gas Services
Work Order: 9802003
Project: Dogie CS North

QC SUMMARY REPORT
Continuing Calibration Verification Standard

Sample ID: **CCV3 QC0529/30** Batch ID: **GC-1_980217** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **2/17/98** Prep Date:

Client ID: **9802003** Run ID: **GC-1_980217A** SeqNo: **94**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.56	0.5	20	0	102.8%	85	115				
Ethylbenzene	21.76	0.5	20	0	108.8%	85	115				
m,p-Xylene	40.95	1	40	0	102.4%	85	115				
o-Xylene	21.29	0.5	20	0	106.4%	85	115				
Toluene	20.93	0.5	20	0	104.6%	85	115				
1,4-Difluorobenzene	101.2	0	100	0	101.2%	70	130				
4-Bromochlorobenzene	95.23	0	100	0	95.2%	70	130				
Fluorobenzene	99.96	0	100	0	100.0%	70	130				

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *24-Feb-98*

CLIENT: PNM Gas Services
Work Order: 9802003
Project: Dogie CS North

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS WATER** Batch ID: **GC-1_980217** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **2/17/98** Prep Date:

Client ID: **9802003** Run ID: **GC-1_980217A** SeqNo: **73**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	43.06	0.5	40	0.1481	107.3%	84	114				
Ethylbenzene	45.72	0.5	40	0	114.3%	86	118				
m,p-Xylene	87.09	1	80	0	108.9%	50	150				
o-Xylene	44.73	0.5	40	0	111.8%	49	147				
Toluene	44.06	0.5	40	0.0621	110.0%	87	120				

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: *24-Feb-98*

CLIENT: PNM Gas Services
Work Order: 9802003
Project: Dogie CS North

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **9802002-06A MS** Batch ID: **GC-1_980217** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **2/17/98** Prep Date:

Client ID: **9802003** Run ID: **GC-1_980217A** SeqNo: **91**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18890	50	4000	15090	95.0%	57	128				
Ethylbenzene	4625	50	4000	489.6	103.4%	78	107				
m,p-Xylene	12080	100	8000	4068	100.2%	67	118				
o-Xylene	5186	50	4000	1043	103.6%	78	107				
Toluene	5121	50	4000	1055	101.7%	74	116				

Sample ID: **9802002-06A MSD** Batch ID: **GC-1_980217** Test Code: **SW8021A** Units: **µg/L** Analysis Date: **2/17/98** Prep Date:

Client ID: **9802003** Run ID: **GC-1_980217A** SeqNo: **92**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19120	50	4000	15090	100.9%	57	128	18890	1.2%	12	
Ethylbenzene	4687	50	4000	489.6	104.9%	78	107	4625	1.3%	11	
m,p-Xylene	12240	100	8000	4068	102.1%	67	118	12080	1.3%	10	
o-Xylene	5283	50	4000	1043	106.0%	78	107	5186	1.9%	14	
Toluene	5195	50	4000	1055	103.5%	74	116	5121	1.4%	14	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.

612 E. Murphy Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 2/16/18

Page: 1 of 1

7179

Purchase Order No.:		Job No.	
SEND INVOICE TO	Name	**Denver Bearden**	
	Company	**PNM Gas Services**	Dept. **324-3763**
	Address	**603 W. Elm Street**	
	City, State, Zip	**Farmington, NM 87401**	
REPORT RESULTS TO	Name	**Maureen Gannon**	Title
	Company	**PNM Gas Services**	
	Mailing Address	**Alverado Square, Mail Stop 0408**	
	City, State, Zip	**Albuquerque, NM 87158**	
	Telephone No.	**505-848-2974**	Telefax No.

Sampling Location: Dogie CS North

Sampler: Dedrick

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	ANALYSIS REQUESTED	LAB ID

Relinquished by: Ronald N Dedrick	Date/Time 2/16/18 0905	Received by: Maureen Gannon	Date/Time 2/16/18 0905
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: Ronald N Dedrick Date 2/16/18
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:
			Results to be sent to both parties.

Distribution: White - On Site Yellow - LAB Pink - Sampler Goldenrod - Client